AMENDMENTS TO THE CLAIMS:

The following listing of claims supersedes all prior versions and listings of claims in this application:

1-38. (Cancelled)

39. (Currently Amended) An adaptive overload control method for controlling the amount of traffic offered by a plurality of network access points to a network access controller for processing, the plurality of network access points being arranged under the control of the network access controller to provide said traffic with access to a communications network, the method comprising:

determining if an overload condition exists at the network access controller; and, if so[[:]], the network access controller externally controlling the amount of traffic which it processes [[by]] and regulating the rate of traffic offered by said plurality of network access points, by:

generating at least one global constraint to restrict the rate at which a network access point admits said traffic to the communications network;

communicating said at least one global traffic constraint to one or more of said plurality of network access points, and

at each network access point which receives said at least one global traffic constraint[[:]], processing the received global traffic constraint to determine a plurality of local constraint conditions by:

determining a local gap interval (Δt) to be imposed on said traffic by said respective network access point, said local gap interval (Δt) being dependent on said global traffic constraint ; [[and]]

determining an initial local gap interval (Δt_0) for said respective network access point which differs from said determined local gap interval (Δt) of the respective network access point; and

imposing said initial local gap interval (Δt_0) at each of said plurality of network access points without waiting for traffic to be received at the respective network access point,

wherein each initial local gap interval (Δt_0) is determined independently by each of said plurality of network access points to be between zero and the respective local gap interval (Δt), and

wherein the initial gap interval varies in a random manner between said plurality of said network access points offering traffic to said network access controller.

40. (Previously Presented) A method as claimed in claim 39, wherein the network access controller analyses the rate at which traffic is offered to the network access controller to determine said at least one global traffic constraint.

41. (Previously Presented) A method as claimed in claim 39, wherein the network access controller determines if an overload condition exists at the network access controller from the aggregate rate at which traffic is offered by all of said plurality of network access points to said network access controller, and wherein said at least one global constraint is derived from said aggregate offered traffic rate.

42. (Currently Amended) A method as claimed in claim 39, wherein the network access controller ~~analyses~~ analyzes the rate at which traffic is rejected by the network access controller to determine said at least one global traffic constraint.

43. (Previously Presented) A method as claimed in claim 39, wherein the network access controller determines if an overload condition exists at the network access controller from a reject rate comprising a rate at which the traffic offered by all of said plurality of network access points to said network access controller is rejected, and wherein said at least one global constraint is derived from the reject rate.

44. (Previously Presented) A method as claimed in claim 39, wherein the controller determines said at least one global traffic constraint by analyzing the rate at which off-hook messages are rejected by the access controller.

45. (Previously Presented) A method as claimed in claim 39, wherein the aggregate distribution of gap intervals (Δt) imposed by all of said network access points under the control of the network access controller is randomized at the onset of the local gap interval (Δt) constraint imposed by each said network access point.

46. (Previously Presented) A method as claimed in claim 39, wherein the aggregate distribution of gap intervals (Δt) imposed by all of said network access points under the control of the network access controller is randomized at the onset of the local gap interval (Δt) constraint imposed by each said network access point, and wherein said randomization is imposed individually by each network access point generating an initial gap interval (Δt_0) whose duration is determined by a random process.

47. (Previously Presented) A method as claimed in claim 39, wherein the aggregate distribution of gap intervals (Δt) imposed by all of said network access points under the control of the network access controller is randomized at the onset of the local gap interval (Δt) constraint imposed by each said network access point, and wherein

said randomization is imposed individually by each network access point implementing said local gap interval (Δt) constraint immediately following processing of the global constraint information received, and wherein the time for the global constraint information processing to be completed following the network access controller generating said global constraint information varies for each of said plurality of network access points.

48. (Previously Presented) A method as claimed in claim 39, wherein in said step of communicating said at least one global traffic constraint to one or more of said plurality of network access points, at least one global traffic constraint is multicast to one or more of said plurality of network access points.

49. (Previously Presented) A method as claimed in claim 39, wherein the initial gap interval (Δt_0) is determined at each network access point using a random or pseudo-random technique.

50. (Previously Presented) A method as claimed in claim 39, wherein the controller determines said at least one global traffic constraint by analyzing the rate at which off-hook messages are rejected by the access controller and, wherein said

communications network is a VoIP network, and said traffic comprises call-related traffic.

51. (Previously Presented) A method as claimed in claim 39, wherein the controller determines said at least one global traffic constraint by analyzing the rate at which off-hook messages are rejected by the access controller and wherein said network access controller is a Media Gateway Controller and each of said plurality of network access points comprises a Media Gateway.

52. (Previously Presented) A method as claimed in any claim 39, wherein a global traffic rate constraint is determined by said network access controller for an address.

53. (Previously Presented) A method as claimed in claim 39, wherein the number of lines along which a network access point receives traffic for transmission across the communications network and a scalable gap interval determined by the network access controller based on the aggregate traffic offered to the network access controller by all contributing network access points are used to determine said local gap interval (Δt).

54. (Previously Presented) A method as claimed in claim 39, wherein a dial-plan is implemented by a network access point to make it unnecessary to send an off-hook condition message to the network access controller when a local gap interval (Δt) constraint is being imposed.

55. (Previously Presented) A method as claimed in claim 39, wherein each network access point determines the initial gap interval (Δt_0) using a probabilistic method.

56. (Previously Presented) A method as claimed in claim 39, wherein the initial gap interval (Δt_0), if not zero, is determined by each network access point such that all of the network access points' initial gap intervals (Δt_0) are uniformly distributed in the range from zero to the local gap interval (Δt) determined by each network access point.

57. (Currently Amended) A method of controlling the number of calls received by a media gateway controller for admittance to a communications network, the media gateway controller being arranged to be connected to a plurality of media gateways, the method comprising ~~the steps of~~:

determining at least one scalable call rate control parameter at the media gateway controller;

the media gateway controller multicasting the scalable rate control parameters to each media gateway within the domain of control of the media gateway controller;

scaling the call rate control parameter at each media gateway to determine a scaled call rate control parameter at the media gateway, wherein the scaled call rate control parameter comprises a call gap interval (Δt) to be imposed by the media gateway on calls destined for the media gateway controller; ~~and~~

the media gateway imposing a predetermined initial local call gap interval (Δt_0) having a time duration between zero and the time duration of the local call gap interval (Δt)[[,]]; and

the media gateway imposing said initial local call gap interval (Δt_0) at each of said plurality of network access points without waiting for a call to be received at the respective network access point, and

wherein the initial gap interval varies in a random manner between said plurality of said network access points offering traffic to said network access controller.

58. (Previously Presented) A method as claimed in claim 57, wherein the initial local gap interval (Δt_0) is initially active for a finite sub-set of said plurality of media gateways.

59. (Previously Presented) A method as claimed in claim 57, wherein the initial gap interval (Δt_0) is determined using a random or pseudo-random technique.

60. (Previously Presented) A method as claimed in claim 57, wherein at least one of said scalable call rate control parameters is assigned to a predetermined called address.

61. (Previously Presented) A method as claimed in claim 57, wherein a dial-plan is imposed by the media gateway controller on the media gateway to determine the control treatment applied to at least part of a called address.

62. (Currently Amended) A method as claimed in claim 57, wherein the media gateway ~~analyses~~ analyzes at least a portion of the called address prior to sending any call related indication to the media gateway controller.

63. (Previously Presented) A method as claimed in claim 57, wherein the media gateway does not send an off-hook signal to the media gateway controller until the media gateway has analyzed at least one digit of the called address.

64. (Previously Presented) A method as claimed in claim 57, wherein the media gateway controller sends a dial-plan to the media gateway in advance of the media gateway receiving a call from a user.

65. (Previously Presented) A method as claimed in claim 57, wherein the media gateway controller indicates to the media gateway which dial-tone the media gateway should apply to the next call for a specific termination.

66. (Previously Presented) A method as claimed in claim 57, wherein the call gap interval (Δt) is imposed by the media gateway after the media gateway has analyzed the specific called address.

67. (Currently Amended) An adaptive overload control system comprising:

a communications network;

a plurality of network access points being arranged under the control of a network access controller to provide traffic with access to said communications network,

wherein the network access controller controls the amount of traffic offered by the plurality of network access points to the network access controller for processing, ~~wherein,~~

the network access controller determines if an overload condition exists at the network access controller; and, if so[[:]], the network access controller externally controls the amount of traffic which it processes by:

regulating the rate of traffic offered by said plurality of network access points by generating at least one global constraint to restrict the rate at which a network access point admits said traffic to the communications network; and

communicating said at least one global traffic constraint to one or more of said plurality of network access points,

wherein each respective one of said plurality of network access points is arranged to receive said at least one global traffic constraint and process the received global traffic constraint to determine a plurality of local constraint conditions by:

determining a local gap interval (Δt) to be imposed on said traffic by said respective network access point, said local gap interval (Δt) being dependent on said global traffic constraint;

determining an initial local gap interval (Δt_0) for said respective network access point which differs from said determined local gap interval (Δt) of the respective network access point; and

imposing said initial local gap interval (Δt_0) without waiting for traffic to be received at the respective network access point,

wherein each initial local gap interval (Δt_0) is determined independently by each respective one of said plurality of network access points in said adaptive overload control system to be between zero and the respective local gap interval (Δt), and

wherein the initial gap interval varies in a random manner between said plurality of said network access points offering traffic to said network access controller.

68. (Previously Presented) An adaptive overload control system as in claim 67, including a network access controller arranged to received traffic offered by a plurality of network access points arranged to provide said traffic with access to a communications network, the network access controller further comprising:

a traffic monitor for monitoring the aggregate offered traffic rate comprising the traffic offered by all of said plurality of network access points to said network access controller;

a processor arranged to determine from said aggregate traffic rate if an overload condition exists at the network access controller;

a processor arranged to generating at least one constraint derived from said monitored aggregate offered traffic rate; and

communication means to communicate said at least one constraint to each of said plurality of network access points.

69. (Previously Presented) An adaptive overload control system as in claim 67, including a network access point arranged to provide a network access controller with an offered traffic rate, and further comprising:

a receiver arranged to received constraint information from the network access controller; and

a processor arranged to process said received constraint information to determine one or more local constraints to be imposed on the traffic which limit the traffic offered by said network access point to the network access controller.